**IN THE CLAIMS**:

Claims 23-26 have been canceled. Claims 1, 4, 7, 9, 11, 16 and 20 have been amended herein. Please note that all claims currently pending and under consideration in the referenced application are shown below. Please enter these claims as amended. This listing of claims will replace all prior versions and listings of claims in the application.

**Listing of Claims:**

1. (Currently Amended) A method for mitigating sidelobe artifacts in a radiation-patterning tool design process, comprising:

defining elements to be formed in a radiation-patterning tool as a function of a wavelength of radiation to be used to create desired patterns and resultant mitigated sidelobes;

calculating a diffraction ring around each of the elements;

identifying at least one location where one diffraction ring from one of the elements intersects another diffraction ring from another of the elements; and

forming at least one sidelobe inhibitor across the at least one location, the sidelobe inhibitor being located to pass radiation in phase with the radiation passing through the elements.

2. (Previously Presented) The method of claim 1 wherein a radius of the diffraction ring is about eight-tenths of the wavelength of radiation, divided by a numerical aperture.

3. (Previously Presented) The method of claim 1 wherein the at least one sidelobe inhibitor has side dimensions of about one-half of the wavelength of the radiation.

4. (Currently Amended) The method of claim 1 wherein the at least one location comprises a plurality of locations and wherein ~~forming~~ forming the at least one sidelobe inhibitor comprises:

defining a guard ring ~~an overlap range~~ extending around each of the plurality of locations;

defining a common location in lieu of each of the plurality of locations when a portion of the

guard ring ~~an overlapping area~~ from one of the plurality of locations is common with a portion of the guard ring ~~an overlapping area~~ from another one of the plurality of locations; and

forming the at least one sidelobe inhibitor across at least a portion of the plurality of locations or the common location[[s]].

5. (Previously Presented) The method of claim 1 wherein the radiation-patterning tool comprises a reticle.

6. (Original) The method of claim 1 wherein the radiation-patterning tool comprises a photomask.

7. (Currently Amended) A method of generating sidelobe inhibitors on a radiation-patterning tool, comprising:

defining elements to be formed in a radiation-patterning tool according to a defined wavelength of radiation intended to pass through the elements to create desired patterns and resultant mitigated sidelobes proximate to the desired patterns;

forming a mathematical description of each of the elements including spatial orientations thereof;

defining a mathematical description of a diffraction ring around the mathematical description of each of the elements;

identifying mathematical descriptions of locations where one mathematical description of a diffraction ring of one of the elements intersects another mathematical description of a diffraction ring of another of the elements; and

forming at least one sidelobe inhibitor on the radiation-patterning tool at ~~with one of the at least one sidelobe inhibitor at the at least~~ one of the mathematical descriptions of locations, the at least one sidelobe inhibitor being located to pass radiation in phase with the radiation passing through the elements.

8. (Previously Presented) The method of claim 7 wherein each of the mathematical

descriptions of diffraction rings extends at a radius defined from a centroid of the mathematical description of one of the elements.

9. (Currently Amended) The method of claim 8 wherein the radius of each of the mathematical descriptions of diffraction rings is about eight-tenths of the defined wavelength of radiation, divided by a numerical aperture.

10. (Previously Presented) The method of claim 7 wherein the sidelobe inhibitors have side dimensions of about one-half the wavelength of the radiation.

11. (Currently Amended) The method of claim 7 further comprising:

identifying a proximity of a first one of the at least one sidelobe inhibitor[[s]] with at least one other one of the at least one sidelobe inhibitor[[s]]; and

when one or more of the at least one sidelobe inhibitor[[s]] create an overlap region ~~are identified as more proximate than a predefined threshold~~ with respect to the at least one other ~~first~~ one of the at least one sidelobe inhibitor[[s]], identifying a common sidelobe inhibitor in lieu of the one or more of the at least one sidelobe inhibitor[[s]] and the at least one other one of the at least one sidelobe inhibitor.

12. (Previously Presented) The method of claim 11 wherein the predefined threshold is about one-half of the defined wavelength of radiation to about one of the defined wavelength of radiation.

13. (Previously Presented) The method of claim 7 wherein the radiation-patterning tool comprises a reticle.

14. (Original) The method of claim 7 wherein the radiation-patterning tool comprises a photomask.

15. (Previously presented) A method for designing a mask for illuminating a pattern, comprising:

defining elements to be formed in the mask;

calculating a diffraction ring around each of the elements, each diffraction ring including a radius coinciding with a location of sidelobes from a wavelength of radiation to create the elements; and

forming a sidelobe inhibitor at least one intersection where a diffraction ring from one of the elements intersects a diffraction ring from another of the elements, the sidelobe inhibitor being located to pass radiation in phase with the radiation passing through the elements.

16. (Currently Amended) The method of claim 15 wherein the at least one intersection comprises a plurality of intersections and further comprising:

defining a guard ring ~~an overlap range~~ extending around each of the plurality of intersections;

defining a common intersection in lieu of each of the plurality of intersections when a portion of the guard ring extending ~~an overlapping area~~ from one of the plurality of intersections is common with a portion of the guard ring extending ~~an overlapping area~~ from another one of the plurality of intersections; and

forming the sidelobe inhibitor across at least a portion of the plurality of intersections or across the common intersection.

17. (Previously Presented) The method of claim 15 wherein a radius of the diffraction ring is about eight-tenths of the wavelength of radiation, divided by a numerical aperture.

18. (Previously Presented) The method of claim 15 wherein the sidelobe inhibitor has side dimensions of about one-half of the wavelength of the radiation.

19. (Previously Presented) A computer-readable medium having computer-executable instructions thereon for determining the placement of sidelobe inhibitors relative to elements to be formed on a radiation-patterning tool, comprising:

calculating a diffraction ring surrounding each of a plurality of elements, the diffraction ring coinciding with an approximate location of a sidelobe corresponding to a wavelength of radiation for the radiation-patterning tool;

calculating an intersect of a first diffraction ring with another of the diffraction rings; and

identifying the intersect as a location to place one of the sidelobe inhibitors, each of the sidelobe inhibitors being located to pass radiation in phase with the radiation passing through the elements.

20. (Currently Amended) The computer-readable medium of claim 19, wherein the identifying the intersect comprises:

firstly identifying one[[s]] ~~of~~ intersect[[s]] wherein placement of one sidelobe inhibiter results in an overlap with another one or more sidelobe inhibitors; and

secondly identifying a common intersect in lieu of intersects resulting in overlap as a location to place one of the sidelobe inhibitors.

21. (Previously Presented) The computer-readable medium of claim 19, wherein the calculating a diffraction ring includes calculating a diffraction ring having a radius of about eight-tenths of the wavelength of radiation, divided by a numerical aperture.

22. (Previously Presented) The computer-readable medium of claim 19, further including forming the sidelobe inhibitors to have side dimensions of about one-half the wavelength of the radiation.

23-26. (Canceled)